For Research Use Only

m7G Monoclonal antibody

Catalog Number:68302-1-Ig 1 Publications

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Basic Information

Catalog Number:
68302-1-Ig

Size:
1000 ug/ml

Source:
Mouse

Isotype:
IgG2b

GenBank Accession Number:

GeneID (NCBI):

Full Name:

Purification Method:
Protein A purification

CloneNo.:
2C3E10

Recommended Dilutions:
IHC 1:1000-1:4000
Dot Blot 1:2500-1:10000

Applications

Tested Applications:
IHC, Dot Blot, ELISA

Species Specificity:
chemical compound

Cited Species:
mouse

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

IHC : mouse testis tissue, human colon cancer tissue, human liver cancer tissue, human pancreas cancer tissue

Dot Blot : HeLa cells,

Background Information

7-Methylguanosine (m7G) is a modified purine nucleoside. It is a methylated version of guanosine and when found in human urine, it may be a biomarker of some types of cancer. In the RNAs, 7-methylguanosine have been used to study and examine the reaction evolving methylguanosine. It also plays a role in mRNA as a blocking group at its 5´-end. The m7G modification actively participates in biological and pathological functions by affecting the metabolism of various RNA molecules, including messenger RNA, ribosomal RNA, microRNA, and transfer RNA. Increasing evidence indicates a critical role for m7G in human disease development, especially cancer, and aberrant m7G levels are closely associated with tumorigenesis and progression via regulation of the expression of multiple oncogenes and tumor suppressor genes.

Protocol for Dot Blot:
https://www.ptglab.com/protocol/68302-1-IgDotBlot.pdf

Notable Publications

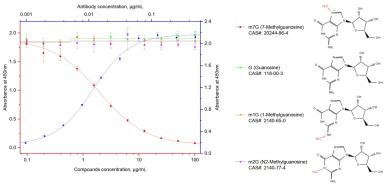
Author	Pubmed ID	Journal	Application
Zhanzhi Meng	38867322	Eur J Med Res	

Storage

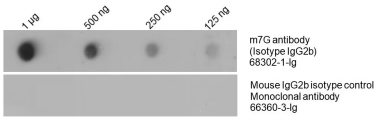
Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:
T: 4006900926 E: Proteintech-CN@ptglab.com W: ptgcn.com

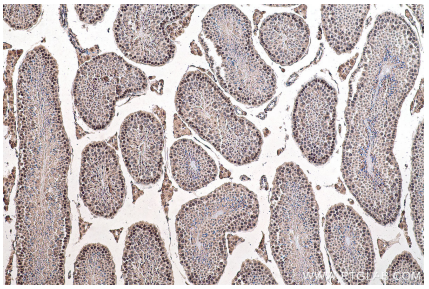
Selected Validation Data



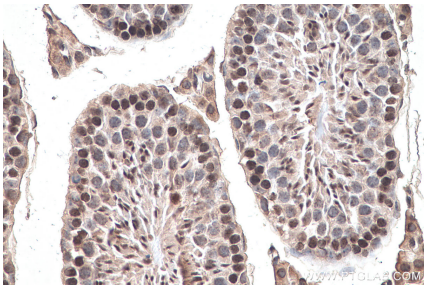
Indirect ELISA and competitive ELISA results show that this antibody is specific to m7G. Indirect ELISA (blue curve, refer to top X-right Y axis) was performed by coating BSA conjugated m7G at 10ng/well followed by blocking with 1% BSA. Serial diluted primary antibody was added to the plates and incubated at 37℃. HRP-goat anti-mouse was used for detection. Competitive ELISA was performed similarly except that different concentration of m7G or its structure analogue



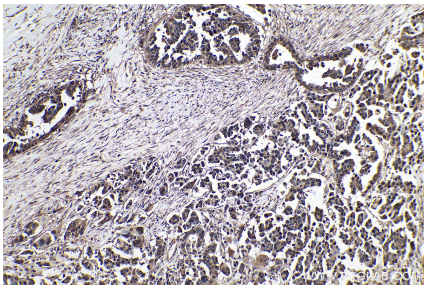
Total RNA was isolated from HeLa cell line and was dotted to NC membrane at different amount as indicated above the dots. The membrane was blocked with BSA and blotted with m7G antibody 68302-1-Ig at 1:5000 followed by incubation of HRP-goat anti-mouse secondary antibody. Signal was developed by ECL substrate. A parallel dot blot was performed using Mouse IgG2b isotype control Monoclonal antibody 66360-3-Ig at the same dose.



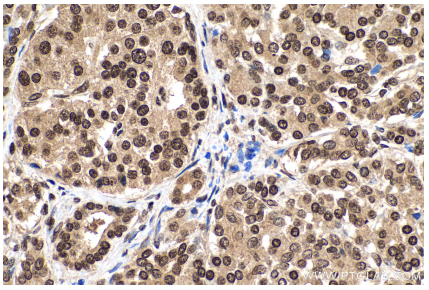
Immunohistochemical analysis of paraffin-embedded mouse testis tissue slide using 68302-1-Ig (m7G antibody) at dilution of 1:2000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



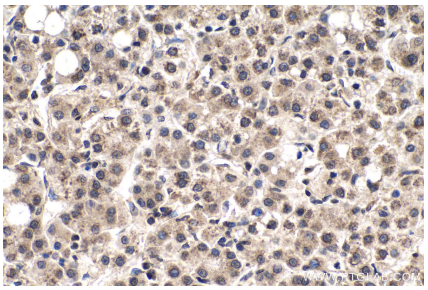
Immunohistochemical analysis of paraffin-embedded mouse testis tissue slide using 68302-1-Ig (m7G antibody) at dilution of 1:2000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human colon cancer tissue slide using 68302-1-Ig (m7G antibody) at dilution of 1:2000 (under 10x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human pancreas cancer tissue slide using 68302-1-Ig (m7G antibody) at dilution of 1:2000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).



Immunohistochemical analysis of paraffin-embedded human liver cancer tissue slide using 68302-1-Ig (m7G antibody) at dilution of 1:2000 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).